User manual

version 1.2

KNXgal

Management alarm control panels Galaxy from KNX bus
powered from KNX bus
Communication indication on KNX and with Galaxy control panel
DIN rail mount (1 modul)
Adjustable address on KNX with program KNXgal.exe (free)

KNXgal is interface between alarm control panels Galaxy and KNX bus.

Using KNXgal it is possible to control and setup various parameters.
KNXgal sends on KNX bus chosen states periodically in selected interval or it is possible to turn periodical sending off and read them actively.

KNXgal does not need external power supplier - it is powered from KNX bus.

Technical specfication		
consumption (from KNX bus)	10	mA
wires cross section (Galaxy)	0,08 – 1,5	mm^2
wires cross section (KNX)	0,6 – 0,8	mm^2
Ingress protection degree (IP)	IP20	
ambient working temperature	0 – 50	°C
storage temperature	-10 – 70	°C
weight	50	g

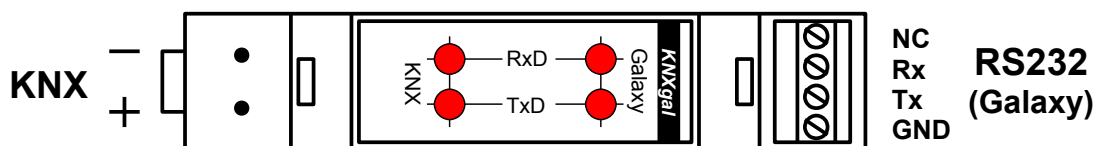| Signalization	
Galaxy RxD	message receiving from alarm control panel
Galaxy TxD	message sending to alarm control panel
KNX RxD	message receiving on KNX
KNX TxD	message sending on KNX
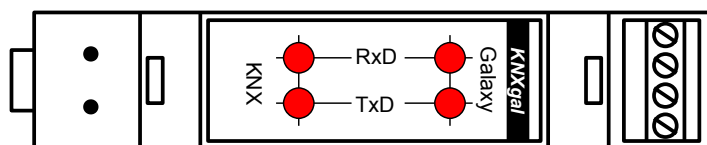
Communication with Galaxy alarm control panel

With Galaxy alarm control panel communicates KNXgal by serial line RSS232 on module GXY-Smart.

Communication parameters		
Speed	115200	kbps
Data bits number	8	bit
Parity	nepoužita	
Stop bits number	1	bit

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Terminals connection	
GND	signal ground
Rx	data transmittion
Tx	receiving data
NC	not connected

KNX — + RxD TxD Galaxy KNXgal NC Rx Tx GND **RS232** (Galaxy)
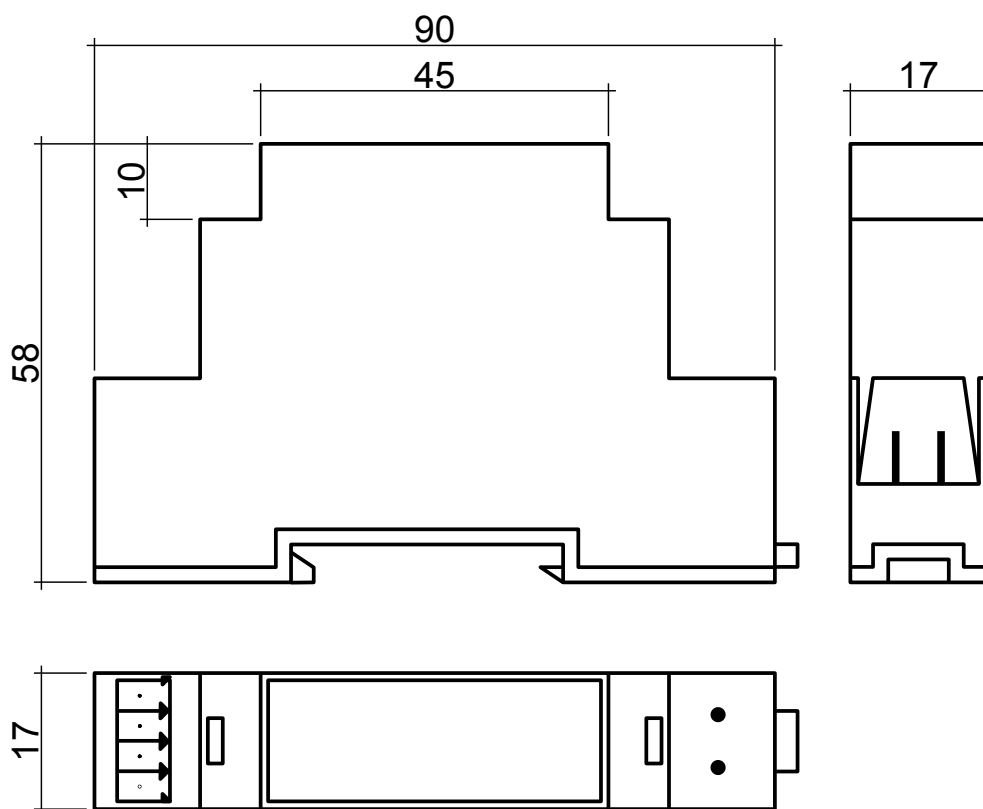
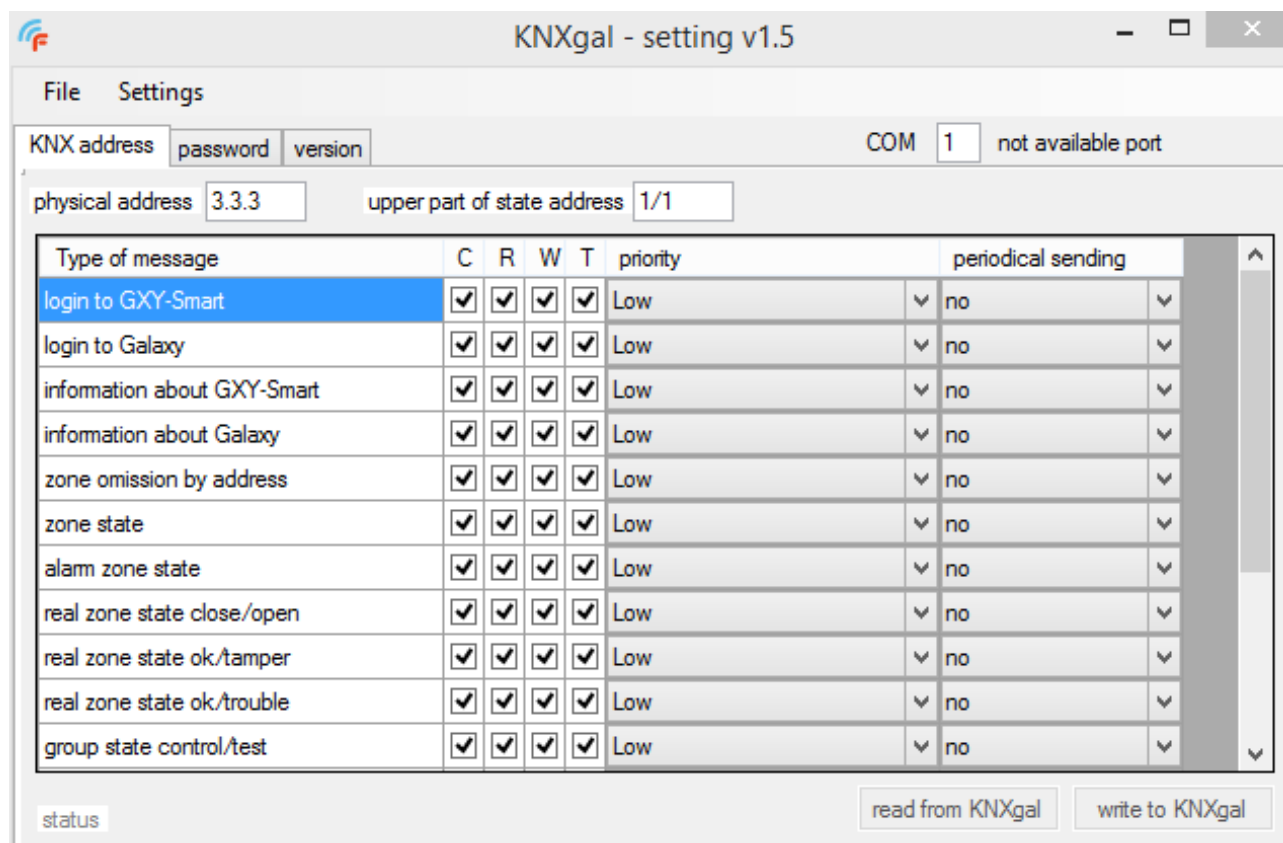*wire preparation*

5mm

0,6 – 0,8mm²

6mm
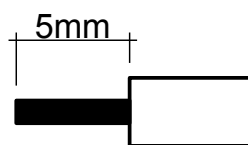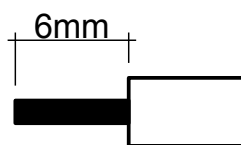
0,08 – 1,5mm²

Dimensions (in mm)

90
45
10
58
17
17

To setup KNXgal unit serves program KNXgal.exe.

KNXgal is connected with computer by serial line, which is designated in normal usage for communication with Galaxy alarm control panel. Before setup it is necessary in item „COM" to set the number of serial port of the computer to which is KNXgal connected.

Menu

File – menu file contains buttons „Open" and „Save as" which can be used to save selected data in KNXgal in the file. After pressing „Save as" user can input the name of the file and data from setup program will be saved in the text file. Saved will be physical address, upper part of address states, parameter setup of individual messages and passwords.

For open a backup click on the button „Open". Data from selected file will be filled in appropriate boxes and they will rewrite the original values.

Setup – In the menu is optional to select language used in setup program (Czech/English).

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Bookmark "KNX address"

Setup of physical address of the unit, state address on KNX and its parameters.

Physical address is given by three numbers in the range of 0-15, 0-15 and 0-255 separated with period. In the picture is shown address 3.3.3

Upper part state address is given by two numbers in the range of 0-15 and 0-4 separated by slash. KNXgal takes 1024 address on the KNX bus. Range of these address is given by the shift of „Upper part address state". In the example is shown 1/1 which means that from address 1/1/0 are used following 1024 address. Used range of address on the KNX bus will therefore be 1/1/0 to 1/4/255. Location of individual states in this range will be described in the part „List of read and controlled states".

Parameter setting determines behavior of individual message types. For each message type can be set symptoms used in KNX systém, priority of sent message and a possibility of periodical message sending.

Symptoms: C (communication) permission of message communication on the KNX bus. R (read) permission to read parameters. W (write) permission to set parameters.

T (transmit) permission to automatically send states.

Priority: any priority can be set for sent message on the KNX bus - automatical sending (Low), alarm states (Alarm), manual control (High), systém function (system).

Periodical sending: for each states can be set periodical sending in the range of 2 to 64 minutes or it can be turned off. States are being sent decomposed so they can not overload the KNX bus.

For data transfer serves buttons „read from KNXgal" and „save to KNXgal".

Bookmark "password"

Password setup which will be used for connection to alarm control panel. Two passwords are set. One for communication module GXY-Smart and second for Galaxy control panel.

For data transfer serves buttons „read from KNXgal" and „save to KNXgal".

Bookmark "version"

Read of firmware version in KNXgal and its actualization.

Button „read" will read the current firmware in KNXgal.

For overwrite the firmware in KNXgal choose the file with new firmware (*.hex) and pressing button „write fw" will start firmware overwrite. Actualization progress is shown.

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number and range of address		data type	R/W	description
1	1			**login to GXY-SMART**
	a/b/0	EIS6	R	0 - logged, 1 - not logged (wrong password), 2 - not logged (communication error)
2	1			**login to Galaxy**
	a/b/1	EIS6	R	0 - logged, 1 - not logged (wrong password), 2 - not logged (communication error)
3	3			**information about GXY-SMART**
	a/b/2-4	EIS10	R	firmware version
		EIS10	R	hardware version
		EIS11	R	inque device identifier
4	11			**details about connected Galaxy control panel**
	a/b/5-15	EIS6	R	type of control panel
		EIS6	R	language version
		EIS10	R	firmware version of control panel
		EIS6	R	number of groups
		EIS10	R	number of zones
		EIS10	R	number of outputs
		EIS10	R	number of users
		EIS10	R	number of remote access codes
		EIS10	R	nuber of technician´s codes
		EIS10	R	number of administrator´s codes
		EIS11	R	ID of control panel
5	16			**Omiting zone according the address**
	a/b/16-31	EIS11	R	512 zones - 32 states in one message (address)
				0 - not omitted, 1 - omited
6	16			**zone states**
	a/b/32-47	EIS11	R	512 znes - 32 states in one message (address)
				0 - low resistance, high resistance, closed 1 - tamper short-circuit, tamper disconnected, opened
7	16			**alarm zone states**
	a/b/48-63	EIS11	R	512 zones - 32 states in one message (address)

				0 - quiet, 1 - alarm
8	16			**real state of zones closed/opened**
	a/b/64-79	EIS11	R	512 zones - 32 states in one message (address)
				0 - closed, 1 - opened
9	16			**real state of zones ok/tamper**
	a/b/80-95	EIS11	R	512 zones - 32 states in one message (address)
				0 - ok, 1 - tamper
10	16			**real state of zones ok/trouble**
	a/b/96-111	EIS11	R	512 zones - 32 states in one message (address)
				0 - ok, 1 - trouble
11	32			**control/test group state**
	a/b/112-143	EIS6	R/W	32 groups
				CONTROL: 0 - off, 1 - full immediate on, 2 - partial off, 3 - alarm reset, 4 - cancel of switching on, 5 - forced switch on; READ: 0 - off, 1 - on, 2 - partial on
12	32			**alarm group state**
	a/b/144-175	EIS6	R	32 groups
				0 - wuiet, 1 - alarm, 2 - required reset
13	32			**extended group state**
	a/b/176-207	EIS6	R	32 groups
				0 - off, 1 - on, 2 - partial on, 3 - ready to turn on, 4 - time lock
14	32			**control of outputs by type**
	a/b/208-239	EIS6	W	32 groups
				deactivation of output type 0 - 100 = 0 - 100
				activation of output type 0 - 100 = 128 - 228
15	8			**read of output state according to address**
	a/b/240-247	EIS11	R	256 outputs - 32 states in one message (address)
				0 - not active, 1 - active
16	512			**omitting zone according the address**
	a/b+1/0-255	EIS1	W	512 zones (512 bit states)
	a/b+2/0-255			0 - not omitted, 1 - omitted
17	256			**control of states according the address**
	a/b+3/0-255	EIS1	W	256 outputs (256 bit states)

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					0 - not active, 1 - active

In the table „List of read and controlled states" are listed all states which are being read from alarm control panel and are possible to write.

In the column „number and range of address" is listed the number of address which are being occupied on KNX bus. Under this detail is listed which of them are occupied. Letters „a" and „b" represents the „ upper part of address states" which is being saved to KNXgal by program KNXgal.exe.

Example:

state of zones (message number 6)

With message type „states of zone" is being read 512 states of zones from alarm control panel. Those states of zone are being transfered by messages type EIS11 (32bit message). On the KNX bus messages occupy 16 address (on each address is 32 state of zones being transfered).

If the „upper part of address states" is set to 1/1 which is shown in the picture in the section „setup", there will be used addresses 1/1/32 – 1/1/47 on the KNX bus.

Given bit set to 0 means „low resistance, high resistance, closed" or set to 1 means „tamper short-circuit, tamper opened, opened".

List of supported alarm control panels		
Galaxy Classic	*Galaxy G3*	*Galaxy Dimension*
Galaxy 8	Galaxy G3-144	Galaxy GD-48
Galaxy 18	Galaxy G3-520	Galaxy GD-96
Galaxy 60	Galaxy G3-48	Galaxy GD-264
Galaxy 500		Galaxy GD-520
Galaxy 512		
Galaxy 16		
Galaxy 16P		
Galaxy 504		
Galaxy 128		

Jeseniova 53, 130 00 Praha 3
tel.: +420 274 775 085
www.foxtron.cz
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